

REMARKS

Claims 1, 2, 4 and 19 - 22 are pending in this application. The applicant respectfully requests reexamination and reconsideration of the pending claims.

In the June 23, 2009 Office Action, the Examiner rejected claims 1, 2 and 19 – 22 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,942,668 to Maly (“the Maly reference”). The Examiner rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Maly in view of U.S. Patent No. 3,476,963 to Feldhoff (“the Feldhoff reference”). The applicant respectfully traverses these rejections.

Claim 1 recites:

An apparatus for forming a plug in a passageway, the apparatus comprising a carrier which in use is lowered into the passageway, the carrier comprising an elongate body of a material resistant to creep which supports at least two spaced apart portions that are a sliding fit in the passageway such that a gap is formed between each of the portions and the passageway, **a body of material the melting point of which is higher than the temperature within the passageway and which expands as it solidifies**, the body of material being supported on the carrier, and means for melting the body of material such that melted material fills a space defined between the first and second portions, wherein means are provided to obstruct the gaps formed between the portions and the passageway, the obstructing means being displaced into the gaps as a result of melting of the body of material or as a result of creep of material after it has been melted and solidified.

The Examiner states that the Maly reference discloses a body of material with a melting point higher than the temperature within the passageway 15a where the means is provided for melting the material to fill the gap, the melting material expands as it solidifies and that the obstructing means is formed as rings 14 provided in grooves as members. The Examiner further states that the method of using such to plug a pipe where cooling fluid such as water can be provided through the member, and where inherently the thinner material in the gap between the rings and the wall would solidify faster since there is less material to retain heat. (*Office Action, page 3*). The applicant

respectfully disagrees with the Examiner. The applicant also notes that the Examiner has not identified specific passages within the Maly reference that disclose the limitations of the applicant's claims.

Specifically, the Maly reference employs a material 15a as a result of melting to force a resilient ring 14 radially outward so as to seal a passage. (*Maly, col. 2, lines 29 – 41*). If it is desired to subsequently remove a seal of this kind, then this can be achieved by cooling. The cooling causes the material to contract and allow the resilient ring 14 to retract out of the engagement with the walls defining the passage. (*Maly, col. 5, lines 47 – 52*). The applicant also notes that material 15a is indicated as having a melting temperature **below** the temperature within the passage at the point which it is sealed. (*Maly, col. 2, lines 25 – 28 and lines 32 – 37*).

In contrast, the apparatus of claim 1 includes **a body of material that has a melting point which is higher than the melting point within the passageway** and also expands as it solidifies. In the instant application, this claim limitation is supported at page 6, lines 14 – 16, which states in pertinent part, that “the resultant expansion contributes to the pressure of the casing 1. Thus, a very tight plug is achieved.” This is not the same as the Maly apparatus which discloses that the melting point of material 15a (akin to the claimed body of material) is lower than the temperature within the passage. In addition, the Maly apparatus discloses that the material 15 contracts during cooling (e.g., which is a time when the material 15 is solidifying) whereas the apparatus of claim 1 **expands** as it solidifies. Accordingly, applicant respectfully submits that claim 1 distinguishes over the Maly reference.

Claim 2 depends directly on claim 1. Accordingly, applicant respectfully submits

that claim 2 distinguishes over the Maly reference for the same reasons as those discussed above in regard to claim 1.

The Feldhoff reference does not make up for the deficiencies of the Maly reference. The Examiner utilized the Feldhoff reference in combination with the Maly reference to reject claim 4. The Examiner utilizes the Feldhoff reference to disclose the use of rings in grooves of sealing members, where the rings can be either solid with no breaks or can be formed as a C-shaped ring as well. (*Office Action, page 3*).

Assuming, *arguendo*, that the Feldhoff reference discloses all that the Examiner states that it does, the Feldhoff reference does not disclose an apparatus for forming a plug in a passageway, the apparatus including a carrier which in use is lowered into the passageway, the carrier comprising an elongate body of a material resistant to creep which supports at least two spaced apart portions that are a sliding fit in the passageway such that a gap is formed between each of the portions and the passageway, **a body of material the melting point of which is higher than the temperature within the passageway and which expands as it solidifies.**

Accordingly, applicant respectfully submits that claim 4 distinguishes over the Feldman / Maly combination. Also, the applicant notes that the Feldman reference relates to a multipart casing for an electrical machine in which adjacent parts are urged together by magnetic forces. This is in an entirely different technical field to that of the Maly reference (and the subject invention). It is therefore submitted that a person of ordinary skill in the art would not consult the Feldhoff reference when seeking to address the types of problems to which the present invention relates.

Independent claim 19 recites similar limitations to claim 1. Accordingly, applicant

respectfully submits that claim 19 distinguishes over the Maly reference for similar reasons to those discussed above in regard to claim 1. Claim 19 recites:

A method for forming a plug in a passageway, wherein a carrier is placed in the passageway, the carrier defining an elongate body of material resistant to creep which supports at least two spaced apart portions that are a sliding fit in the passage way such that a gap is formed between each of the portions and passageway, a body of material the melting point of which is higher than the temperature within the passageway and which expands as it solidifies is melted in the passageway to fill a space defined between the spaced apart portions, and **the carrier is cooled such that molten material adjacent the spaced apart portions solidifies before molten material between the spaced apart portions.**

The Maly reference does not disclose the highlighted limitation of claim 19. Instead, the Maly reference discloses that “refrigerating fluid [which] may be forced down the central conduit to freeze the ... meltable material.” (*Maly, col. 5, lines 47 – 49*). The intention of the Maly reference cooling is to “contract [thereby] allowing the resilient sealing rings to retract out of engagement with the well casing.” (*Maly, col. 5, lines 50 – 52*). This is not the same as cooling the carrier such that molten material adjacent portions solidifies, as is recited in claim 19. Accordingly, applicant further respectfully submits that claim 19 distinguishes over the Maly reference.

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Applicant believes that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Please do not hesitate to contact the undersigned attorney if there are any questions in regard to this election. Thank you for your assistance.

An action on the merits is respectfully requested.

Respectfully submitted,

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